

disappear from the *Arctiinae*, to appear in the *Pericopidae* of the Philadelphia List. In the next List to be published it seems likely that *Melanchroia* will submit, with similar celerity, to a third *changement de place*.

As to the position of *Cerathosia*, Dr. Packard says: "The occurrence of such [glandular] hairs in this genus [*Cerathosia*] is interesting, from the fact that they have not yet been observed in the Arctians, to which this moth has been referred, nor in the *Noctuide*, among which it should be placed, since no Arctians have, when hatched, smooth glandular hairs." Proc. Bost. S. N., Hist., xxv., 109, 1890. The citation of this genus in a synoptic table does not of itself constitute a proof that it is correctly classified.

SOME NEW ATTIDÆ.

BY NATHAN BANKS, SEA CLIFF, N.Y.

Phidippus borcalis, nov. sp.

Length, 13. mm.; ceph., 4.2 mm. long, 3 mm. wide. Cephalothorax very dark brown, covered with black hairs, clypeus with white hairs, and some white scales on the lower sides; a bunch of stiff hairs behind the eyes of second row; mandibles red-brown, iridescent greenish near tip; sternum brown with black hairs. Abdomen black, a narrow basal line of white, and broad side stripes of white which do not quite reach to the tip; just beyond the middle the side stripes indent the central black area; sides black and venter blackish; legs black, bases of metatarsi reddish. The cephalothorax is moderately high, narrower than in the allied species, the quadrangle wider behind, the anterior row much curved, the S. E. small and well separated from the M. E., the eyes of second row almost twice as near to the lateral as to the dorsal. The posterior metatarsi are more slender than usual, and spined only at tip. The region of the epigynum is nearly circular in outline, with a deep rounded excision behind, and two quite widely separated openings in the anterior portion. Two females; Crawford Notch, White Mts., N.H. (Mrs. Slosson). Differs from allied species (*rufus*, *mystaceus*) in the narrower cephalothorax, markings of abdomen, etc.

Dendryphantès bifida, nov. sp.

Length, ♂, 4 mm.; ceph., 1.8 mm. long, 1.2 mm. wide; ♀, 4.2 to 5 mm. long. Cephalothorax reddish, black around eyes, some long white hairs on clypeus; mandibles red-brown; sternum dark brown or black; legs yel-

lowish, femora mostly black in the male, anterior legs of female reddish, patellæ and tibiæ of other legs reddish or with red bands. Abdomen red-brown, in male with four black spots each side near tip, in female a black stripe each side with three pale spots, as in *D. flavus*, sometimes a pair of pale spots near base; venter pale with three dark brown or black stripes. In structure similar to *D. flavus* and *D. montanus*, but the mandibles are not enlarged as in those species, and the size is much smaller. The male palpus is similar to *D. montanus*, but with a smaller tibial hook, a smaller striate upper portion of bulb, and with a tube yet stouter and deeply bifid at tip. The epigynum has a triangular excision behind, and a deeply lunate dark patch in front. Several specimens; Olympia, Washington (T. Kincaid).

Attus dorsatus, nov. sp.

Length, 3.5 mm.; ceph., 1.5 mm. long, .95 mm. wide. Cephalothorax red brown, eye-region blackish, a narrow median light stripe extending from the dark of eye-region to the hind margin of the cephalothorax, also a light stripe each side from just below the dorsal eyes to the hind margin, a few whitish hairs around anterior eyes, abdomen above and below a uniform gray, sternum and legs brownish yellow, latter with ends of the joints darker, mandibles reddish. Cephalothorax but little shorter and narrower than the abdomen, barely wider behind the eye-region than in front, eye-region as wide behind as in front, eyes of second row a little nearer dorsal than lateral eyes. Fourth pair of legs much the longest, first the next; tibia IV. twice as long as III., anterior coxæ separated by more than width of lip; metatarsi IV. spined throughout. The epigynum consists of a depressed area, broadly rounded in front and longer than broad, at the anterior end there are two square holes, and from them extend behind on each side a clavate body, enclosing between their tips two elongate holes. One specimen; Southern California.

Attus morosus, nov. sp.

Length, 4.5 mm.; ceph., 2.1 mm. long, 1.4 mm. wide. Eye-region blackish, thoracic part reddish, a median white line; dorsum of abdomen brown, a pair of large black spots on anterior part, on the anterior edge of each is a small white dot, behind them there is a broad, triangular, transverse area of white with three brown chevrons, a large black spot each side terminating the two posterior chevrons, behind them is a white band and a narrow black band just above the spinnerets; sides lined

with brown and white ; venter pale, with a large light brown spot ; sternum blackish, pale on the margins ; legs brownish, paler at tips, posterior pair indistinctly ringed. Cephalothorax as usual, quadrangle of eyes equally wide in front and behind, eyes of second row half-way between dorsal and lateral eyes. Fourth pair of legs much longer than third ; anterior coxæ separated by more than width of lip ; metatarsi IV. spined throughout. The epigynum consists of a circular depressed area, divided by a broad septum, much broader behind than in front, where on each side there is a small dark spot. One female ; Olympia, Washington (T. Kincaid).

Icius obliquus, nov. sp.

Length, 2.8 mm.; ceph., 1.2 mm. long, .8 mm. wide. Cephalothorax yellowish-brown, eyes connected by a black band, extending behind and enclosing the dorsal eyes, a few of the radial furrows partly black, margin black ; abdomen yellowish, a few brownish chevrons near the tip, sides with oblique blackish lines, venter suffused with black, two rows of yellow spots ; sternum yellowish, black on edge ; legs yellowish-brown, anterior pair stoutest and darkest, with a few black patches, palpi similar, mandibles yellowish, black near base. Sides of cephalothorax almost straight, slightly narrowed behind ; eye-region wider in front than behind ; eyes of second row about half-way between dorsal and lateral eyes. Anterior coxæ separated by more than width of lip ; fourth pair of legs longest, third nearly as long as first ; the three pairs of spines on tibia I. are very long, metatarsus IV. spined only at tip. The tibia of palpus has no projection, the lower part of palpal organ is large, the upper portion is cut off from that below by a transverse furrow and is twice as wide as long ; the tube is slender, but slightly curved and projects into a large circular cavity in the upper portion of the tarsus. One male and one young female ; Olympia, Washington (T. Kincaid).

Icius monticola, nov. sp.

Length, 4 mm. ♂. Cephalothorax red-brown, black on margin and in eye-region, clothed with white scales ; a median row of stiff bristles just above anterior eyes. Legs yellow-brown, the femora darker ; on posterior pairs a black ring at base of tibia, metatarsus and tarsus ; clothed with long black hairs and shorter white scales ; palpi red-brown, clothed with white scales ; sternum dark red-brown ; abdomen blackish (but somewhat discoloured), clothed above with white scales, and below with fine hairs. Cephalothorax moderately long, low and flat, broadest in

middle, eye-region one and one-half times as wide as long, equally wide in front and behind; the A. M. E. large, nearly touching, the eyes of second row a little nearer to A. S. E. than to dorsal eyes. Mandibles small and weak; sternum narrow; anterior coxæ separated by more than width of labium; leg I. barely longer than leg IV.; femora, patella, and tibia enlarged; metatarsus IV. spined only at tip. Palpi short, the tarsus truncate at tip, tibia with a short straight-pointed projection on outside, lower part of palpal organ very much swollen, almost pointed, upper part short, tube short, bent upon itself. A male; near Livermore, Colo. (C. F. Baker.)

Icius minutus, nov. sp.

Length, 2.5 mm.; ceph., 1.1 mm. long, .75 wide. Cephalothorax red-brown, eye-region black, abdomen dark gray, with a few narrow light chevrons on the posterior part; legs white, annulate with black, the femora partly suffused with fuscous, sternum dark gray, venter pale, a median and two broader lateral gray stripes, palpi white, distal joints a little enlarged, mandibles yellowish. Cephalothorax widest behind the middle, eye-region a trifle narrower behind than in front, legs short, fourth pair wanting, third as long as the first, second shorter, anterior coxæ separated by more than width of labium. Abdomen one and one-half times as long as the cephalothorax. A quite prominent bristle arising from between anterior median eyes. The epigynum has, in the posterior portion, two very large contiguous circular depressions; and two very much smaller holes, slightly separated, in the anterior portion. One female; Olympia, Washington (T. Kincaid).

Icius floridanus, nov. sp.

Length, 3 mm. Cephalothorax dark yellow-brown, darker in eye-region, clothed with yellowish or golden scales, especially near eyes; mandibles yellowish; sternum blackish. Legs pale yellowish with a black stripe on anterior and one on posterior sides of patella, tibia and metatarsus, anterior femur blackish, rest of anterior leg reddish, with the usual black stripes. Abdomen black, with a band of white scales at base, above with dark, somewhat coppery scales, below with white hairs. Cephalothorax quite short and broad, sides but little rounded, low and nearly flat, eye-region nearly twice as wide as long, a little wider behind than in front; eyes of second row closer to lateral than to dorsal eyes. Mandibles quite large, with a black tooth behind fang; sternum short, triangular; anterior

coxæ separated by width of lip; leg I. longest and stoutest, but not much longer than leg IV., metatarsus IV. spined only at tip. The palpus is long and slender, a short curved spine at tip of tibia, the tarsus fully twice as long as broad, palpal organ but little convex, divided transversely and the upper part bilobed, behind one of these lobes arises the long and slender tube, which curves toward the middle and extends into a furrow in the upper part of tarsus. One male from Punta Gorda, Florida (Mrs. A. T. Slosson).

Icius similis, nov. sp.

Length, 4.1 mm.; ceph., 1.6 mm. long, 1.1 mm. wide. Cephalothorax with sides and thoracic part reddish, with a few white scales and a marginal stripe of white; eye-region black, posterior part iridescent; clypeus with white hairs; a ridge of white or yellowish hairs above the first row of eyes; mandibles, legs and sternum reddish, the latter darker than the other parts; the legs have a black stripe above and one on each side of patella, tibia and metatarsus; the posterior metatarsi are almost wholly black. Abdomen black, covered with pale scales, not or but slightly iridescent.

In structure and coloration this is similar to *I. elegans*, Hentz, but the scales are not as iridescent, there is no pale line around the abdomen of the ♀, the legs are more reddish, the ♂ has no brush to tibia I., the tube of palpus much stouter; the ♀ is but little larger than the ♂. The epigynum has a small median rounded excision in the posterior margin; and two oval holes, about their diameter apart, in front. Several specimens from Olympia, Washington, and from Ft. Collins, Colo. Prof. Emerton, in his N. Eng. Attidæ, mentions what is probably this species as a variety of *Icius elegans*.

Icius sexmaculatus, nov. sp.

Length, 3.5 mm.; ceph., 1.4 mm. long, .85 mm. wide. Thoracic part black, with some golden hairs on the anterior edge; sides and thoracic part reddish, mandibles reddish brown; sternum yellowish; dorsum of abdomen red-brown with blackish patches, and with six white spots, two transverse basal ones, two larger, median, more circular ones, and two small preapical ones; beyond the middle pair a few indistinct pale chevrons; legs pale yellowish, anterior pair more reddish, especially femora and bands on patellæ and tibiæ; palpi pale; sides of abdomen red-brown; venter pale, with a brown line each side. This species is similar to *I.*

lineatus; the cephalothorax is the same, though perhaps a trifle higher and the dorsal eyes slightly farther apart; otherwise the structure is like that species. The tibia of the palpus has a short black spine at tip, the tarsus is much narrower than in *I. lineatus* and the palpal organ quite simple, the lower part is large and projecting, the upper part striate and with a short, stout apical tube; there is on the outer side the outline of a curved tube pointing down toward the tibial spine. One male; Washington, D.C.

Saitis parvulus, nov. sp.

Length, 3 mm.; ceph., 1.4 mm. long, 1.05 mm. wide. The eye-region black; the thoracic part reddish, with two black spots on the posterior margin; the palpi and first legs black, the second legs mostly black; other pairs yellowish, no black spots as in *S. pulex*; the mandibles red-brown; the sternum yellowish-brown; the abdomen black above, with a broad white stripe, broadest at the middle, beginning just before the middle it contains five broad black chevrons; venter yellowish, with a median black spot and two black stripes. Similar to *S. pulex*, but the cephalothorax is shorter and the eye-region is proportionately broader, the quadrangle being a little narrower behind; the palpus is much smaller, the tibia has not the long, thin projection, nor a broad lobe below, but a moderate, curved black process; the bulb of palpus has a swollen part not seen in *S. pulex*. One male from a deep and cold swamp near Ithaca, N. Y.

Habrocestum borealis, nov. sp.

Length, 5.5 mm.; ceph., 3. mm. long, 2. mm. wide. Cephalothorax black, in a strong light the thoracic part showing slightly reddish; the sides with white scales, which on the margin form a distinct white line; above anterior row of eyes is a crest of long black hairs; sternum black, sometimes pale in the centre; coxæ mostly black, sometimes posterior ones pale at base; palpi black, except the tibia and tarsus, which are pale; anterior pairs of legs mostly pale, with a few black patches on femora and tibiæ; posterior legs mostly black, the tarsi pale, and the patellæ, tibiæ and metatarsi are lineated with pale. The palpi have many white hairs or scales, and on the tarsi they are interspersed with long black hairs; there are white scales on the black parts of the legs. The abdomen is jet black, sides white, above with a white basal band and a band crossing the dorsum just before the middle and curving to meet the white sides; just above the spinnerets is a pair of white dots, and in front of these a median white spot, sometimes elongate. The structure

is similar to the other species of the genus ; there is a horny spot on the base of the abdomen. The palpus is similar to *H. cocatum*, but is not so broad ; the tibial projection is much longer and the tube is not so stout. There is no projection at the tip of patella III. Several males, from Franconia, N. H. (Mrs. A. T. Slosson).

Habrocestum clypeatum, nov. sp.

Length, ♂, 4.7 mm. Cephalothorax yellowish in front, black on sides and a short median stripe from behind ; clothed with tawny scales ; a curved band of white scales just above first row of eyes, surrounding the eyes of second row and passing below the dorsal eyes and extending behind toward the posterior margin ; a stripe of white scales near each lower margin ; clypeus black, a few white hairs in centre and on mandibles, and a prominent elongate vertical spot of white scales under each side eye. Leg I. black, except metatarsus and tarsus which are pure white, clothed with white scales, those under the tibia extremely long and pedicellate ; basal joints of leg II. blackish, with white scales ; legs III. and IV. brownish-yellow, femora blackish at base, with white scales and black hairs ; sternum pale. Abdomen black above, a basal band of white and a white median stripe behind ; sides and venter pale, the latter with two black stripes. Of the usual structure of the genus, leg III. simple. Palpus broad, much like that of *H. agilis*, Bks. (*auratum*, Peck., not Hentz.), but the tibial projection is much stouter, and the long tube starts nearer to the tip of bulb. One male : Dixon's Canon, Coio. (C. F. Baker).

Zygoballus iridescens, nov. sp.

Length, 4.1 mm. ; ceph., 1.8 mm. long, 1.4 mm. wide. Eye-region black, thoracic part reddish, both with whitish hairs and scales. Anterior femora black, black stripe above and on inner side of patella and tibia I., rest of legs pale yellowish, without any spots. Mandibles and mouth parts red-brown ; sternum black. Abdomen black, clothed above and on sides with iridescent scales and long hairs ; venter black, hairy, and with two indistinct rows of pale spots. Structure in general similar to *Z. bettini*, but the mandibles are not quite so large ; and the sternum is much broader, not narrowed in front, so that the anterior coxæ, which are not as long as in *Z. bettini*, are more widely separated. The region of the epigynum is red-brown, and is semicircular in outline ; showing four pale spots, two in front close together, and one in each posterior corner. Franconia, N. H. (Mrs. Annie T. Slosson).